

Abstract

A circuit and method for increasing the dynamic range of CMOS image sensors designed with a thin gate oxide layer. The circuit includes a high voltage supply circuit and a high voltage level shifter circuit. The high voltage supply circuit is configured to supply a voltage to the shifter circuit. The voltage has a voltage level higher than the maximum supply voltage of the associated fabrication process. The shifter circuit is configured to output a high reset signal based on a reset signal generated to reset a pixel circuit of a pixel array. Instead of the reset signal, the high reset signal is coupled to a gate of the reset transistor in the pixel circuit. The high reset signal allows the reset transistor to maintain a gate to source potential less than the maximum supply voltage even when the high reset signal is greater than the maximum supply voltage.

